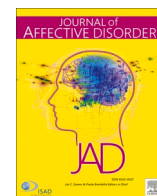




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Correspondence

Benzodiazepines consumption may have increased during the COVID-19 pandemic

ARTICLE INFO

Keywords

SARS-CoV-2

COVID-19

Benzodiazepines

To the Editor

We read with interest the article of [Bai et al. \(2022\)](#), who concluded that the prevalence of mental health issues, including depressive, anxiety and insomnia symptoms has dramatically increased during the ongoing coronavirus disease 2019 (COVID-19) pandemic. Several lines of evidence confirm that the prevalence of anxiety and other stress-related disorders, which could be prevented or treated with medication like benzodiazepines, may have indeed dramatically increased after the worldwide transmission of COVID-19 ([Turna et al., 2021](#)).

To garner more information on this matter, and specifically on the burden of Internet access for benzodiazepines in Italy, we carried out an electronic search on Google Trends (Google Inc. Mountain View, CA, US) using the keywords (medications) “Alprazolam,” “Bromazepam,” “Clonazepam,” and “Lorazepam,” which are the four most used benzodiazepine molecules in Italy. The geographical area was set to “Italy,” and the search period ranged between June 6, 2017, and June 1, 2022. The weekly Google Trends score recorded for each drug, which mirrors the popularity of that search term during the specified period, was downloaded into a Microsoft Excel file (Microsoft, Redmond, WA, United States) and analyzed with Analyse-it (Analyse-it Software Ltd., Leeds, UK). The study was conducted in accordance with the Declaration of Helsinki under the terms of relevant local legislation. This analysis was based on electronic searches in the open, publicly available national repositories, and thus no informed consent or Ethical Committee approvals were required.

The main results of our analysis are summarized in [Fig. 1](#). Briefly, the median value of weekly Google Trends score recorded for each of the four benzodiazepines was significantly higher after the emergence of the COVID-19 pandemic in Italy (i.e., after March 1, 2020) compared to the

period before (all comparisons, $p < 0.001$). The Google searches increased by 18 % for Alprazolam, 13 % for Bromazepam, 14 % for Clonazepam, and 8 % for Lorazepam.

This infodemiological analysis suggests that the Web interest and, therefore, the probable consumption of benzodiazepines has significantly increased in Italy after the COVID-19 pandemic. Since these four benzodiazepines are most likely taken as medications for preventing or treating anxiety symptoms or disorders, it is conceivable that the ongoing COVID-19 pandemic is causing significant repercussions on the mental health of the general population. Developing specific public health measures to cope with increased population anxiety represent an urgent action in order to return, at least, to pre-COVID-19 population's anxiety rates.

Conflict of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Financial disclosure

None declared.

CRediT authorship contribution statement

All authors have equally contributed to the study design, data collection and analysis and write up including the final draft of the manuscript.

Abbreviations: COVID-19, coronavirus disease 2019.

<https://doi.org/10.1016/j.jad.2022.07.017>

Received 3 June 2022; Accepted 9 July 2022

Available online 13 July 2022

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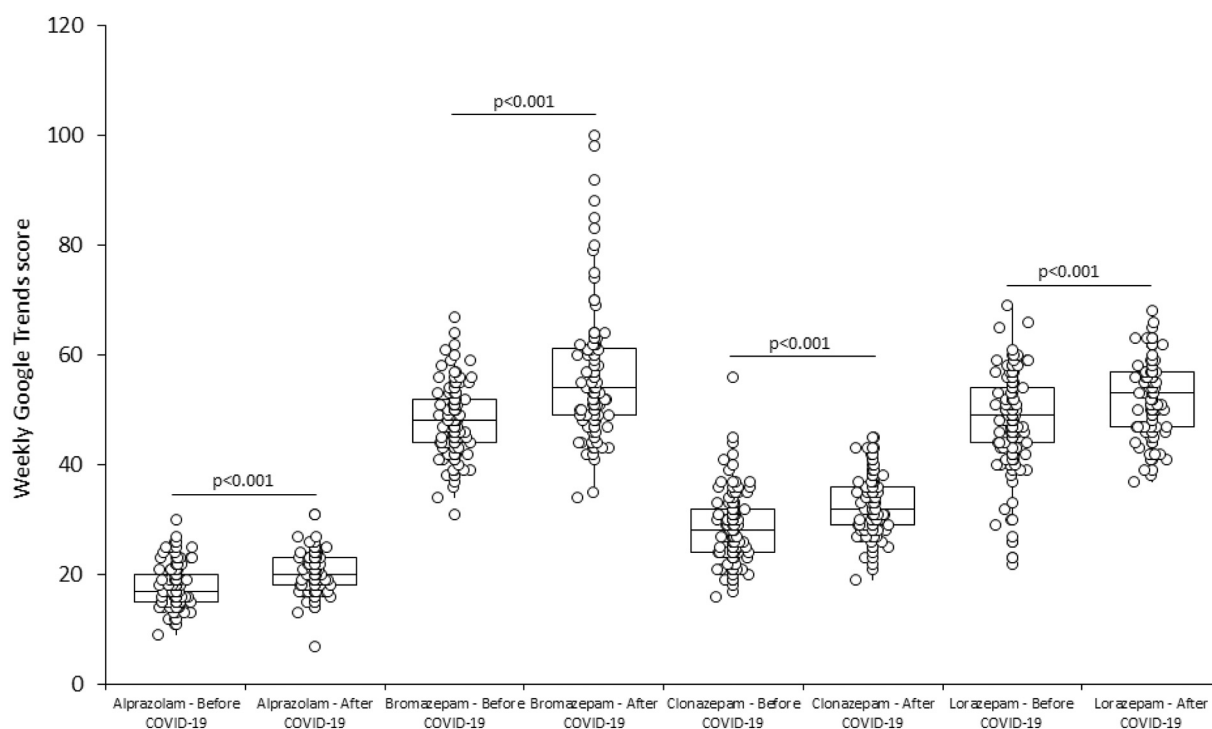


Fig. 1. Weekly Google Trend score for benzodiazepines “Alprazolam,” “Bromazepam,” “Clonazepam,” and “Lorazepam” before and after the emergence of the coronavirus disease 2019 (COVID-19) pandemic.

Acknowledgements

None.

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